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| Notice of Allowability | Application No. | Applicant(s) | |
| | 10/733,523 | BEAMAN ET AL. | |
| | Examiner | Art Unit | |
| | David Turocy | 1762 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Interview 11/27/2006.
2. ☒ The allowed claim(s) is/are 1-15, 27-34 and 40-43.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date <u>11/27/2006</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Chen Liang on 11/27/2006.

The application has been amended as follows:

In the Claims

Please insert, in Claim 1, line 6, after "deposition chamber", the phrase – ", the first temperature sensor providing an indication of the heat transfer from the heat source to the deposition chamber"—

Please insert, in Claim 27, line 6, after "deposition chamber", the phrase – ", the first temperature sensor providing an indication of the heat transfer from the heat source to the deposition chamber"—

Please insert, in Claim 33, line 6, after "deposition chamber", the phrase – ", the first temperature sensor providing an indication of the heat transfer from the heat source to the deposition chamber"—

Please insert, in Claim 40, line 6, after “deposition chamber”, the phrase – “, the first temperature sensor providing an indication of the heat transfer from the heat source to the deposition chamber”—

The subject matter of the amendments has support in the original disclosure because the specification discloses the outer temperature sensor (80 a-d), in between the heater (50b) and the deposition chamber (see Figure 3). The specification discloses ramping the temperature within the process chamber by controlling the heaters based on the temperature measured by the outer temperature sensors (paragraph 0045) and thus the amendment is supported by the original disclosure. See also figure 5, which graphically discloses the relationship between the deposition chamber temperature with the reading of the outer sensor.

2. The following is an examiner’s statement of reasons for allowance:

None of the prior art cited or reviewed by the examiner teaches or reasonably suggests during a temperature ramp-up, comparing a control temperature to a target temperature, wherein the control temperature alternates between a first temperature and a second temperature as claimed. WO 02/073660 discloses measuring the temperatures and controlling the process using a weighted average between the a first and second temperature and fails to suggest alternating during the ramp-up as claimed. US Patent 6622104 discloses controlling a temperature using multiple thermocouples

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(Columns 5-7), US Patent 6207937 discloses controlling the temperature by relating power imputer to spike and profile thermocouple outputs (Column 9-Column 10), and US Patent 6294394 discloses controlling the ramp rate to control the stress during ramping; however, neither teaches or suggest alternating the control temperature during the ramp-up as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

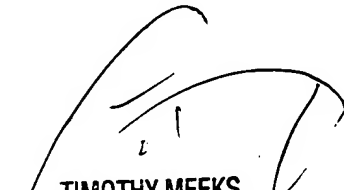
Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David Turocy
AU 1762



TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER